

# Climate Change Impact Mitigation & Adaptation

## Our Approach

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# Climate Change Impact Mitigation & Adaptation

## Our Approach

Our objective is to contribute towards Climate Change impacts mitigation **aligned with the objectives of the Paris Agreement** to limit the increase of global average temperature to 2°C above pre-industrial levels with an additional desire of **not to exceed 1.5°C**.

### Our strategic multipronged approach

Achieve **100% renewable** electricity by 2020.  
(70 mn units)

**Zero scope 2 carbon** emission by 2020.  
(Reduction potential – 50000 MT)

Green Development **across Airport** to support **Climate Change** Mitigation actions

**To be a benchmark** in the industry and support UNSDG

Paved Roads from **Waste Plastics**

**Responsible consumption** of resources





## PROJECT TRIGGER

Management Vision for the Sustainable Future had propelled us to conceptualize this project

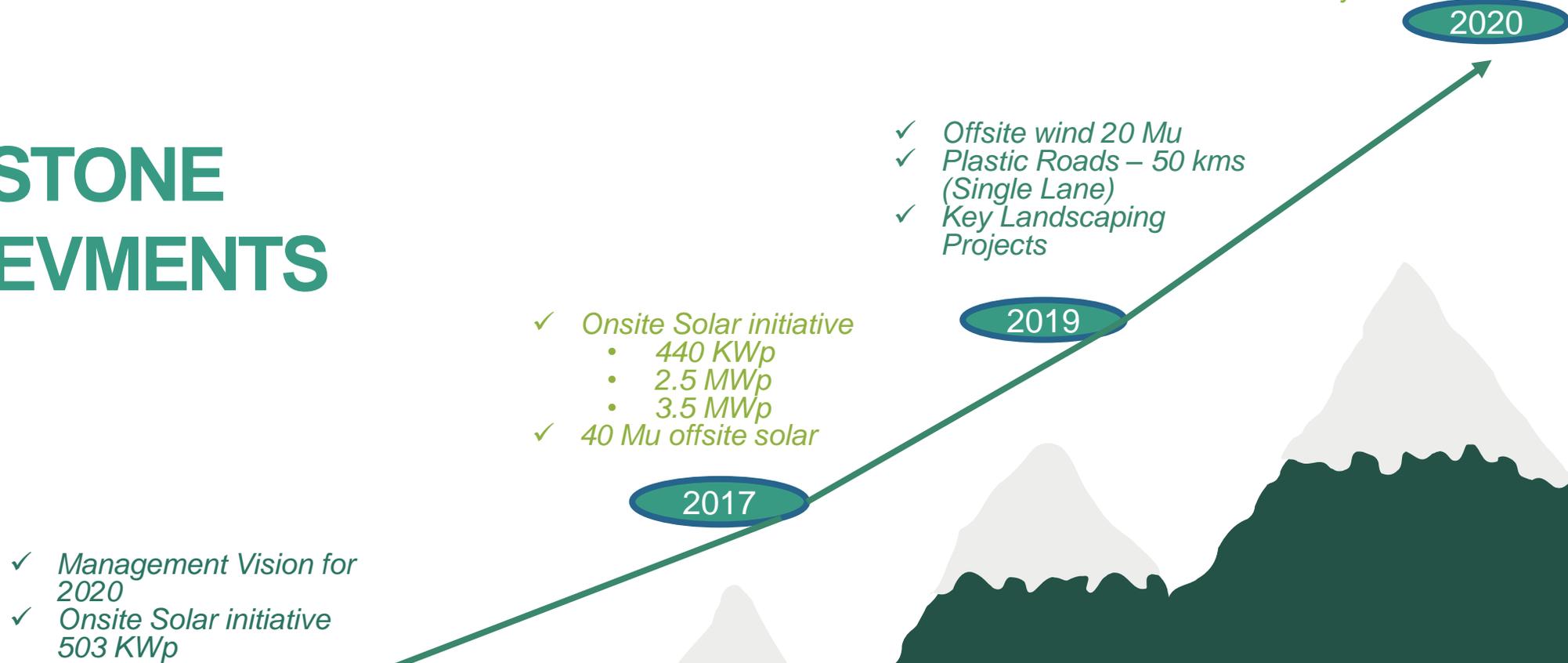
## UNIQUENESS

Application of the project and the integrated multipronged approach makes it a unique project



# MILESTONE ACHIEVEMENTS

- ✓ 100% Renewable Electricity
- ✓ Landscaping key Projects



Note: No deviations in timelines

# CHALLENGES FACED

Statutory Approvals

Daily work approval in our Airport environment

Glare Analysis to evaluate aircraft as well ATC safety requirements.

Available offsite projects

Roof top Onsite work without operation interruptions

Matured trees 7m - 8m tall relocation.

Availability of Plastic Waste

Vendor Mindset & Alignment

Cost of transportation and survival of trees .



# TANGIBLE BENEFITS

The annual renewable energy footprint at BLR Airport is 70 million KWH. This is equivalent to the annual consumption of approx. 20,000 homes (considered at 300 units per month)

## 100% RENEWABLE ELECTRICITY

(70 Million Units) – Rs 2 – 3 savings per unit  
Overall, In house nursery, reuse, storage of plants etc.  
savings : Rs 30 Lakhs



## RESPONSIBLE CONSUMPTION

Responsible Consumption across our operations lead to optimal & appropriate use of resources  
Dust control at Airport due to Landscaping



## CO2 & BITUMEN REDUCTION

Scope 2 Emissions Zero – 50000 MT Co2 emissions reduction  
6% of Bitumen reduced in our 50 km roads



# INTANGIBLE BENEFITS

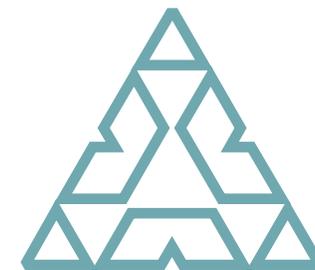
Support Government mission to provide Clean and Affordable Energy

Contribution to the Government of India GHG emissions reduction as per Paris Agreement

Large Green Space to create nature's paradise for our stakeholders especially passengers

Pollution Control





# LANDSCAPING

As of now we have 19500 trees & palms.

Considering the ongoing development, we will

have additional 28115 no of trees & palms

# REPLICATION POTENTIAL WITHIN THE SECTOR

We are single location company and focusing our drive across KIAB. Our initiatives can be replicated in any sector through Initial Layout plan

External Connect / Knowledge sharing:

- ✓ Airport Council International (ACI) Seminars / Working Committee meetings
- ✓ Schneider Resilient Airports of Tomorrow
- ✓ GRI forums
- ✓ CII seminars
- ✓ Ministry of Civil Aviation meetings
- ✓ Sustainability Reports



**SUSTAINABILITY IS THE FOUNDATION  
OF EVERYTHING WE DO AT  
BLR AIRPORT.**



#WorldEarthDay

**BLRAIRPORT IS THE FIRST AIRPORT  
IN INDIA TO PAVE SOME OF ITS  
ROADS USING WASTE #PLASTIC**



#WorldEarthDay



Till date, 60+ tonnes of waste plastic has been used in building roads within the Airport campus.



60 lane-kms of road is completed using waste plastic

#WorldEarthDay



#WorldEarthDay



# Paved Roads from Plastic Waste

A sustainable approach of building roads using waste plastic was conceptualized, experimented with multiple rounds of trials, and a project roll-out decision was finalised.

**BIAL aims at building 50 kms of road made from waste plastic within the BLR Airport campus contributing to Climate Change impact mitigation**



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# ACHIEVING NATIONAL BENCHMARK / STANDARD

## Renewable Power Target

*The renewable power target of 175 GW by 2022 – Government of India*

## GHS Emission Reduction

*GHG Emissions reduction target (Paris Pledge) by 33% to 35% by 2030 from 2005 levels*

## ACI Accreditation

*Airport Council International (ACI) Accreditation : Net Zero Carbon Emissions by 2050, approach as per Paris Agreement*

## Rules/ Regulations

*Plastics / Solid Waste Management Rules*

*We are the pioneers in the airport sector driving the climate change impact mitigation agenda, achieving 100% renewable electricity consumption & Zero Scope 2 emissions*

*In India in or sector, Cochin airport generates >100% of their consumption and export to the grid*

# PRIORITY PROJECTS ON FAST TRACK

**1** Identified land / roof top

**2** Statutory approvals

**3** Shortlisted reliable PPA vendors

**4** Explored Offsite Solar / Wind projects availability in Karnataka for our requirement

**5** For Landscaping / trees, Coordinated with Landscape Architect for design and setting out plan.

**6** For Plastic waste Roads, identified the technology/aligned vendor/ plastic waste source



# MAJOR LEARNINGS

Power of inclusive stakeholder engagement involving community in our Sustainability initiatives



**Integration of solar power with DG, grid power**



**Open Access opportunities mitigating onsite installations challenges**



**Re-utilization of Transplanted trees by applying Innovative Practices and Strategy**



**Soil Stabilization and slope beautification using Geo-green Erosion Control Blanket with compartments**

**Successful and cost-effective Tree relocations / storage etc.**

# ENVIRONMENT PERFORMANCE EVALUATION

## Management Performance Indicator(MPI)

1. 100% Renewable Electricity
2. Environment Protection through Landscaping, etc.,
3. Community Building
4. Water Positivity

## Environmental Condition Indicator(ECI)

1. Scope 2 Emissions Zero – Around 50000 Tones of CO2 reduction, ACI – Airport Council International carbon Neutral Accreditation, Level 3+
2. Green Environment across Airport

## Operational Performance Indicator (OPI)

| Year           | Onsite + Offsite renewable Generations (KWh) | Tons of co2 savings |
|----------------|--|---------------------|
| <b>FY18-19</b> | 37611284.6                                   | 30841.25            |
| <b>FY19-20</b> | 51914279.3                                   | 42569.70            |
| <b>FY20-21</b> | 61180766.8                                   | 50168.22            |

Rs 2-3 per unit savings, 100% Renewable Electricity



**THANK YOU**

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